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# **Development of an automatic method to assess the human-animal relationship in broilers at flock level**

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## **Abstract**

The aim of the overall study was to evaluate the potential for using automatic measurements of distribution and activity and to investigate whether this method can be used to assess the human-animal relationship in broiler flocks. A good relationship between the stockman and his/her animals has been proven to have a positive effect on production and animal welfare parameters. In broiler chickens the quality of the human-animal relationship is related to fearfulness of the birds and can be measured by various tests. One such method, the Avoidance Distance Touch Test, is included in the Welfare Quality® welfare assessment protocol for broilers. Although physical contact between farmer and animal is rather limited in broiler flocks, studies show that the fear level of broilers varies as a result of the farmer's behaviour and routines and this has an effect on both productivity and welfare. In this pre-study, the human-animal relationship was assessed on one broiler farm in Italy using the Avoidance Distance Touch Test as the gold standard. Activity and distribution of the animals were recorded using video imaging technology. These data were gathered before, during and after a trained assessor walked through the broiler flock, mimicking in a standardised way the daily check that a farmer would perform. The hypothesis was that the time that it takes for the animals to return to their normal activity and distribution levels, after being disturbed by human presence, would reflect the fear of humans. Increased activity for a longer period would indicate high fear levels.